

Work Order ID 124642 - 2

124642

Page 1

Thursday, September 18, 2014 11:55:49 AM

Item ID: D4857-M

Accept

N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Wiper Deflector

Start Date: 9/18/2014 Start Qty: 20.00

20

Cust Item ID:

Required Date: 10/3/2014 Req'd Qty: 20.00

20

Customer:

Reference:

Approvals: Process Plan: MF

Date: 14-9-18 Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run Start *NR1*

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D4857	E								

100

0.00

100

Purchasing

Memo

0.00

Purchasing

Issue P/O: 25862

Possible supplier: CARBON BY DESIGN

Manufacture as per dwg D4857-M

Prime Deflector as per dwg (SEE NOTE 4)

Certificate of Conformity release note is required.

CL 14/09/22 @20

110

Receive & Inspect for Damage & Mat'l Certs

0.00

110

Packaging

Memo

0.00

Packaging

5x SP 14-10-14

Work Order ID 124642

124642

Page 2

Thursday, September 18, 2014 11:55:49 AM

Item ID: D4857-M Accept *N900040100* Setup Start *NS1*
 Revision ID: Stop *NS2*
 Item Name: Wiper Deflector
 Start Date: 9/18/2014 Start Qty: 20.00 *20* Cust Item ID:
 Required Date: 10/3/2014 Req'd Qty: 20.00 *20* Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start *NR1*
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120	QC5- Inspect part completeness to step on W/O	0.00							DAS 38 14-10-14 9-89
120									
QC	Memo	0.00							
Quality Control									
130	Identify as per dwg & Stock Location: <u>CEA</u>	0.00							DAS 30 14/10/14 9-89
130									
Packaging	Memo	0.00							
Packaging									
140	QC21- Final Inspection - Work Order Release	0.00							14/10/15
140									
QC	Memo	0.00							
Quality Control									

14-10-14

Picklist Print

Page 1

Thursday, September 18, 2014 11:55:49 AM

Work Order ID: 124642

124642

Parent Item: D4857-M

D4857-M

Parent Item Name: Wiper Deflector

Start Date: 9/18/2014

Required Date: 10/3/2014

Start Qty: 20.00

Required Qty: 20.00

Comments: IPP REV:A 14.05.21 NEW ISSUE DD VERF:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

D4857-P		Purchased		No			Each	0.0000					
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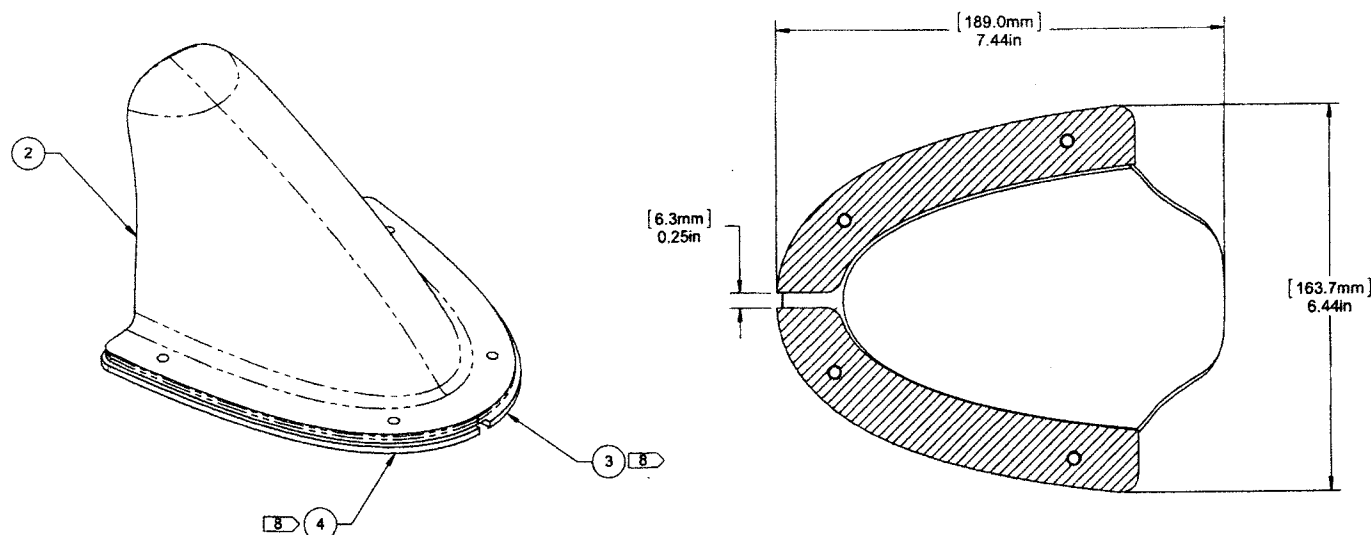
D4857-P

Wiper Deflector

20 5x

5x 8P/4-10-14

ITEM	QTY -043	P/N	DESCRIPTION
1	X	D4857-043	WIPER DEFLECTOR ASSEMBLY, LH
2	1	D4857-3	WIPER DEFLECTOR LH
3	1	D5117-1	GASKET
4	1	D5117-3	GASKET



D4857-043 WIPER DEFLECTOR ASSEMBLY, LH

RELEASED
2014-06-11

NOTES:

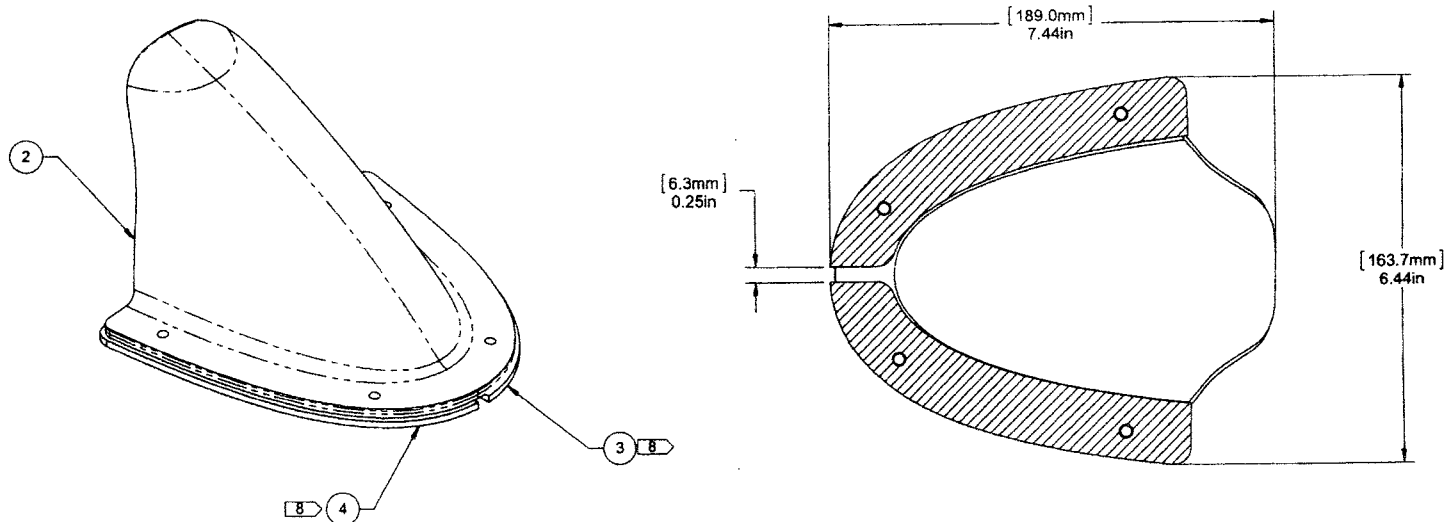
- 1) MATERIAL: N/A
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED, ALL METRIC DIMENSIONS ARE REFERENCE DIMENSIONS.
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N D4857-043, REVISION, BATCH NUMBER, AND DATE OF MANUFACTURE, AS PER QSI 044 METHOD 6.1
- 7) WEIGHT: 0.38 lbs (0.17 kg)
- 8) BOND D5117-1/-3 GASKET TO EDGE OF PART USING DOW CORNING 736 ADHESIVE

E	REVISE NOTE 6) (ZN A8-1, A8-2, A8-3); AND NOTE 8) (ZN A8-1, A8-2, A8-3)	AK	14.06.05
D	ADDED D4857-043 (ZN C7-1), D4857-044 (ZN C7-2), D4857-3 (ZN C7-4), D4857-4 (ZN C7-5) AND D4857-M (ZN C7-6)	AK	14.05.13
C	ADDED 4 MOUNTING HOLES	DW	13.12.09
B	REVISED BOM, DRAWING VIEWS, NOTES	PB	13.08.13
A	NEW RELEASE	DB	13.05.23
REV	DESCRIPTION	BY	DATE

DESIGN	DW	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
CHECKED	VS	DRAWING NO.	REV. E
MFG. APPR.	JFS	D4857	SHEET 1 OF 7
APPROVED	MP	TITLE	SCALE
DE APPR.	DS	WIPER DEFLECTOR	NTS
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APPROVED

ITEM	QTY -044	P/N	DESCRIPTION
1	X	D4857-044	WIPER DEFLECTOR ASSEMBLY, RH
2	1	D4857-4	WIPER DEFLECTOR RH
3	1	D5117-5	GASKET
4	1	D5117-7	GASKET



D4857-044 WIPER DEFLECTOR ASSEMBLY, RH

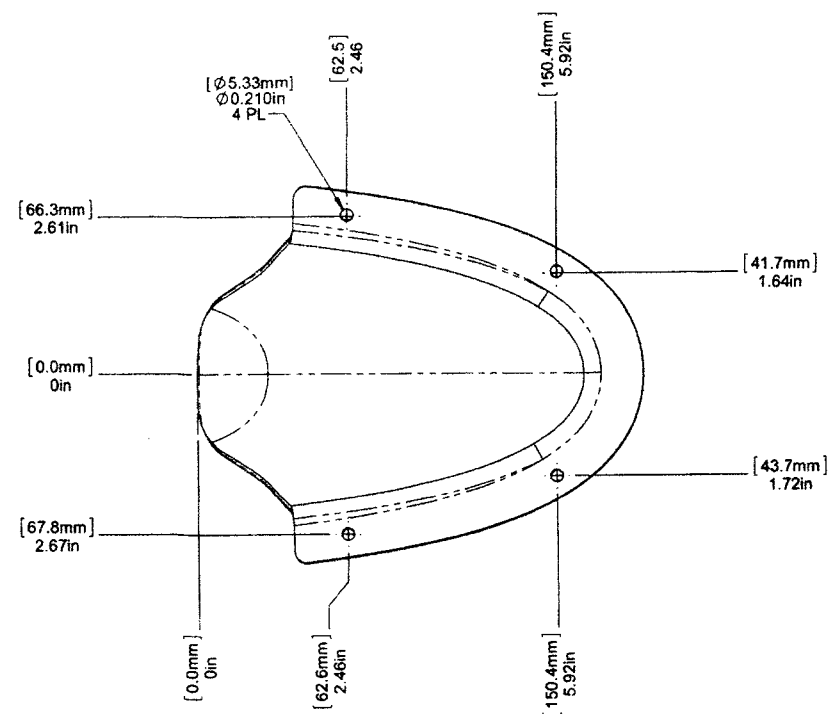
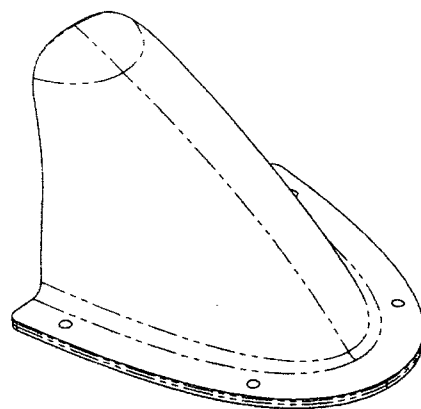
RELEASED
2014-06-11

NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 010 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED, ALL METRIC DIMENSIONS ARE REFERENCE DIMENSIONS.
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N D4857-044, REVISION, BATCH NUMBER, AND DATE OF MANUFACTURE, AS PER QSI 044 METHOD 6.1
- 7) WEIGHT: 0.38 lbs (0.17 kg)
- 8) BOND D5117-5/-7 GASKET TO EDGE OF PART USING DOW CORNING 736 ADHESIVE

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DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
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MFG. APPR.	JFS	D4857	SHEET 2 OF 7
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D4857-1 WIPER DEFLECTOR

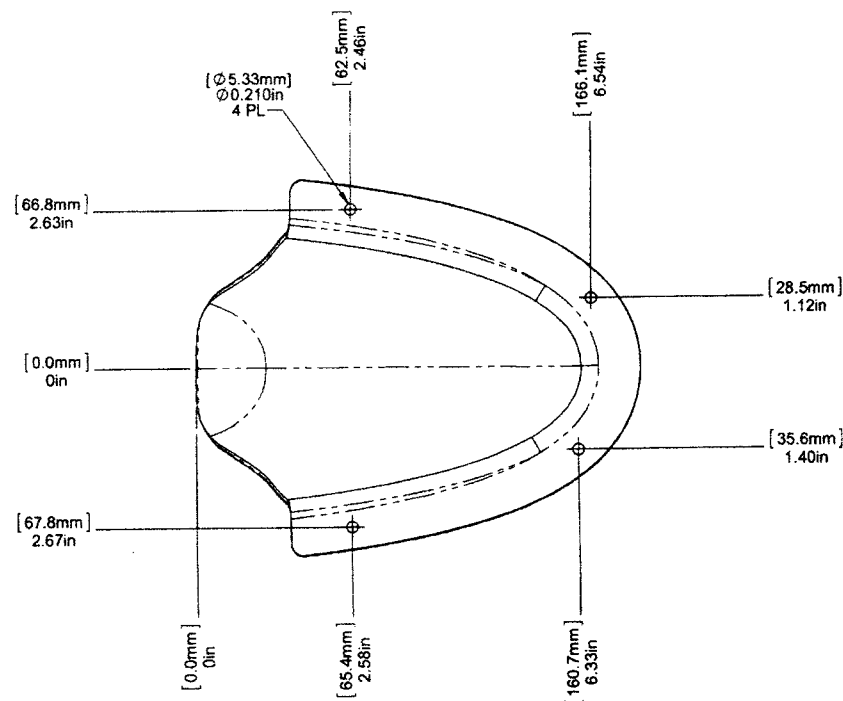
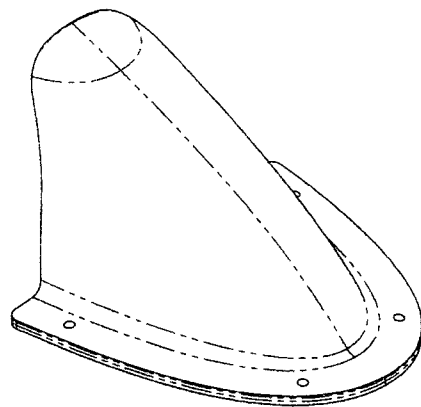
RELEASED
2014-06-11
WIP

NOTES:

- 1) MATERIAL: MADE FROM D4857-M
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED, ALL METRIC DIMENSIONS ARE REFERENCE DIMENSIONS.
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N D4857-1, REVISION, BATCH NUMBER, AND DATE OF MANUFACTURE, AS PER QSI 044 METHOD 6.1
- 7) WEIGHT: 0.24 lbs (0.11 kg)
- 8) PART DIMENSIONS CONTROLLED BY CAD MODEL FILE D4857-1-e.IGES

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D4857-3 WIPER DEFLECTOR, LH

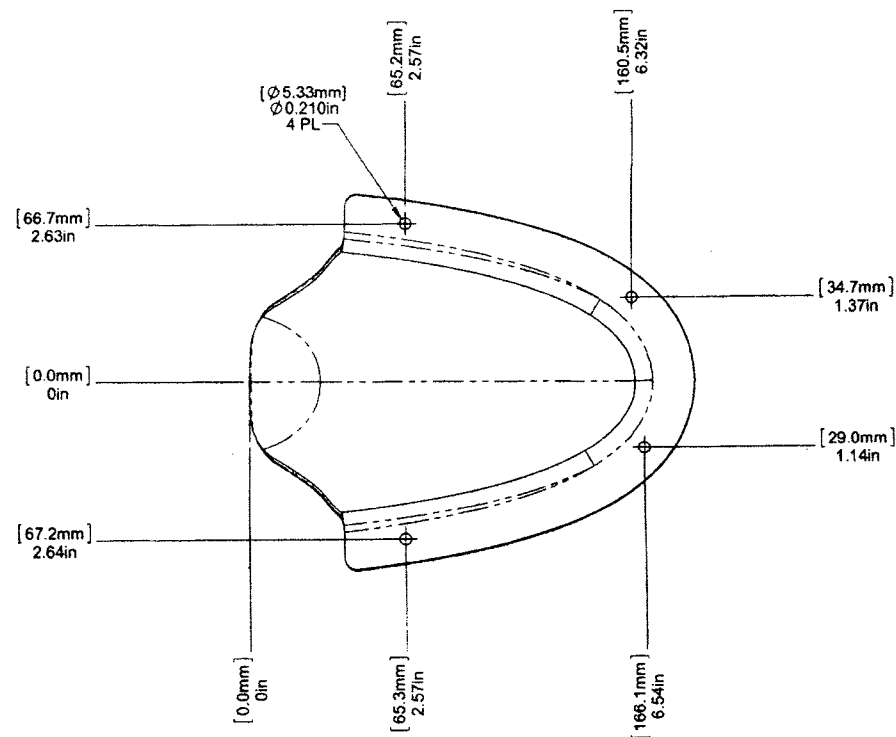
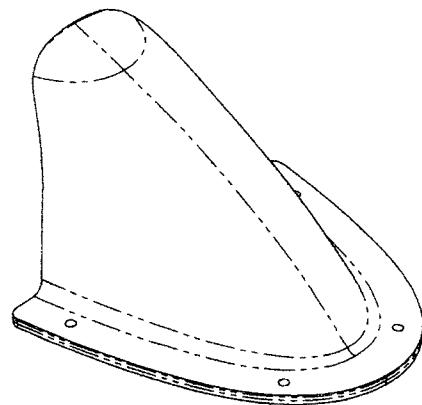
RELEASED
2014-06-11

NOTES:

- 1) MATERIAL: MADE FROM D4857-M
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART Q61-018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED, ALL METRIC DIMENSIONS ARE REFERENCE DIMENSIONS.
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: 0.24 lbs (0.11 kg)
- 8) PART DIMENSIONS CONTROLLED BY CAD MODEL FILE D4857-3-e.IGES

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D4857-4 WIPER DEFLECTOR, RH

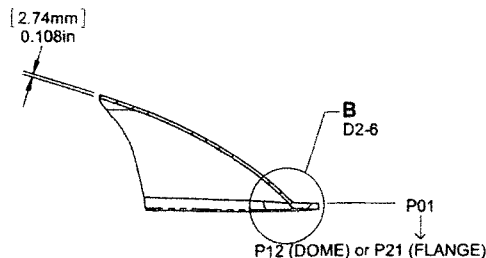
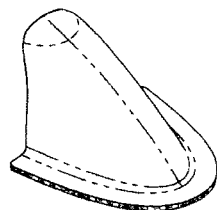
RELEASED
2014-06-11
MP

NOTES:

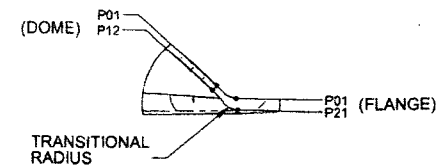
- 1) MATERIAL: MADE FROM D4857-M
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART OSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED, ALL METRIC DIMENSIONS ARE REFERENCE DIMENSIONS.
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: 0.24 lbs (0.11 kg)
- 8) PART DIMENSIONS CONTROLLED BY CAD MODEL FILE D4857-4-e.IGES

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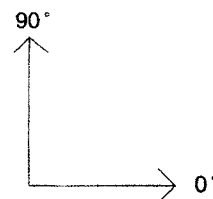
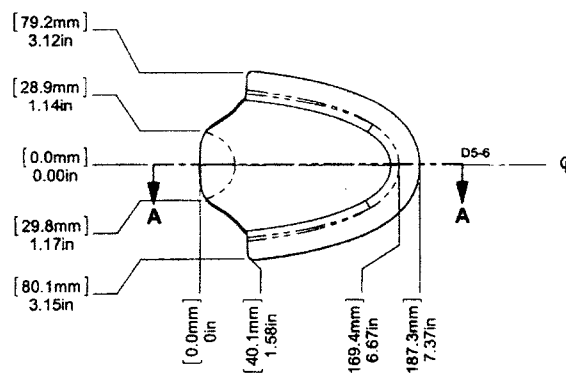
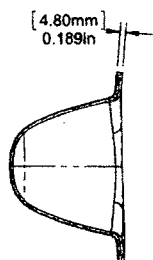
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DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	VS	DRAWING NO.	REV. E
MFG. APPR.	JFS	D4857	SHEET 5 OF 7
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SECTION A-A
B5-6



DETAIL B
D5-6



D4857-M WIPER DEFLECTOR

NOTES:

- 1) MATERIAL: KEVLAR #285/353 4H SATIN, EPOXY PREPREG, 250°F CURE, 40% R/C
- 2) MATERIAL: CARBON FIBER PREPREG, ALDILA PREPREG SYSTEM 3K2X2-FR250-204/40 T300,
- 3) MATERIAL: ALDILA #120 E-GLASS AR250 WITH 48% RC;
- 4) FINISH: PRIMER IAW MIL-P-85582, 2-7 MIL MAX,
- 5) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 6) UNITS: INCHES UNLESS OTHERWISE NOTED, ALL METRIC DIMENSIONS ARE REFERENCE DIMENSIONS.
- 7) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 8) IDENTIFICATION: N/A
- 9) WEIGHT: 0.24 lbs (0.11 kg)
- 10) PART DIMENSIONS CONTROLLED BY CAD MODEL FILE D4857-M.e.IGES
- 11) SEE PAGE 7 FOR LAYUP SCHEDULE. MANUFACTURE IAW MPP 145. CURE 250°F FOR 4 HOURS.

RELEASED
2014-06-11

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DESIGN	DW	DART AEROSPACE LTD	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	VS	DRAWING NO.	REV. E
MFG. APPR.	JFS	D4857	SHEET 6 OF 7
APPROVED	MP	TITLE	SCALE
DE APPR.	DS-#	WIPER DEFLECTOR	NTS
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P 01
P 02
P 03
P 04
P 05
P 06
P 07
P 08
P 09
P 10
P 11
P 12

LAYUP OF LAYERS (DOME)

LAMINATE - .108in (12 LAYERS)			
PLY	WARP ANGLE	MATERIAL	THICKNESS
01	90	1	.008-.010
02	0	1	.008-.010
03	90	2	.008-.010
04	0	2	.008-.010
05	90	2	.008-.010
06	0	2	.008-.010
07	90	2	.008-.010
08	0	2	.008-.010
09	90	2	.008-.010
10	0	2	.008-.010
11	90	2	.008-.010
12	0	2	.008-.010

P 01
P 02
P 03
P 04
P 05
P 06
P 07
P 08
P 09
P 10
P 11
P 12
P 13
P 14
P 15
P 16
P 17
P 18
P 19
P 20
P 21

LAYUP OF LAYERS (FLANGE)

LAMINATE - .189in (21 LAYERS)			
PLY	WARP ANGLE	MATERIAL	THICKNESS
01	90	1	.008-.010
02	0	1	.008-.010
03	90	2	.008-.010
04	0	2	.008-.010
05	90	2	.008-.010
06	0	2	.008-.010
07	90	2	.008-.010
08	0	2	.008-.010
09	90	2	.008-.010
10	0	2	.008-.010
11	90	2	.008-.010
12	0	2	.008-.010
13	90	2	.008-.010
14	0	2	.008-.010
15	90	2	.008-.010
16	0	2	.008-.010
17	90	2	.008-.010
18	0	2	.008-.010
19	90	2	.008-.010
20	0	2	.008-.010
21	90	3	.005

APPROVED

DESIGN	DW	DART AEROSPACE LTD	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	VS	DRAWING NO.	REV. E
MFG. APPR.	JFS	D4857	SHEET 7 OF 7
APPROVED	MP	TITLE	SCALE
DE APPR.	DS	WIPER DEFLECTOR	NTS
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RELEASED
2014-06-11



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID **PO25862**

Purchase Order Date 9/22/2014

PO Print Date 9/22/2014

Page Number 1 of 2

Order From :
CARBON BY DESIGN
4128 AVENIDA DE LA PLATA
OCEANSIDE, CALIFORNIA 92056
USA

VU-CBD001

Ship To : DART AEROSPACE LTD
1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

FAKED

Contact Name		Buyer	Chantal Lavoie
Vendor Phone	760-643-1300	Customer POID	
Ship To Contact		Customer Tax #	10127-2607
Ship To Phone		Terms	Net 30
Ship Via:	FedEx Overnight collect	Currency	USD
Ship Acct:		FOB	FCA - (Free Carrier)

Reference Vendor Part Number Line Comments Delivery Comments	Description/ Mfg ID	Req Date/ Taxable Promise Date	CD	Req Qty/ Unit of Measure	PO Unit Price	Extended Price
D4857 P	Wiper Deflector	10/10/2014 Yes 10/10/2014	FN	20.00 Each	\$695.00	\$13,900.00

MANUFACTURE AS PER DWG D4857 REV. E
B124642

recus 8/14-10-14.

recus.

8/14-10-14.

Line Total: \$13,900.00

71401-45	PROCUREMENT QUALITY CLAUSES	10/10/2014 No 10/10/2014		1.00	\$0.00	\$0.00
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Procurement Quality Clauses
A004 faa-pma/tso
A005 right of entry
A016 personnel qualification
A025 certification of conformance
A040 notification of quality escape
A041 quality management
A042 dart notification by supplier
A043 retention of quality documents

Instructions: Fedex Acc#151793240

Note:

9/22/2014



Packaging List

Date: 10/10/2014

Packaging List No. 17302

Cage Code: 4DG17

CBD Work Order No. 8229

Customer PO No.: PO25862

Please Deliver To:
Dart Aerospace LTD 1270 Aberdeen Hawkesbury, ON K6A 1K7 Canada

Item	Line #	Description	Qty	U/M
D4857-P	1	Dart Aerospace D4857-P, Wiper Deflector S/N: 17302-1/17302-5 Procurement Quality Clauses	5	
		Use Customer Shipping Account#		

Thank you for your business. **Total Items:** 5 **SHIPPING VALUE**
\$3,475.00

CERTIFICATE OF CONFORMANCE (SHORT FORM CUSTOMERS ONLY)

I certify that on _____, the Carbon by Design LP furnished the supplies or services called for by the Purchase Order Above via Delivery in accordance with all applicable requirements.

I further certify that the supplies or services are of the quality specified and conform in all respects with the contract requirements, including specifications, drawings, preservation, packaging, packing, marking requirements, and physical item identification, and are in the quantity shown in this or on the attached acceptance document.

Quality: _____ Date: _____

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carbon by design

4128 Avenida De La Plata. Oceanside, CA 92056
Phone: 760-643-1300 Fax: 760-643-1333
www.carbonbydesign.com

Invoice

Date: 10/10/2014
Invoice # 17302
PO. No.: PO25862
Sales Order#: 8229

Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Fed-Ex #151793240

Please Ship To:

Dart Aerospace LTD
1270 Aberdeen
Hawkesbury, ON K6A 1K7
Canada

Customer Phone	Terms	Rep	Ship Date	Ship Via	Account Status
613-632-5200	Net 30	JB	10/10/2014	FedEx Nex...	lz

Item	Line #	Qty	Description	U/M	Unit Price	Amount
D4857-P	1	5	Dart Aerospace D4857-P, Wiper Deflector S/N: 17302-1/17302-5 Procurement Quality Clauses	ea	695.00	3,475.00

Thank you for your business.

Total \$3,475.00

All returns must be accompanied by a RMA #. Please call customer service at 760-643-1300 to receive a RMA number. Products damaged in shipment must be immediately documented and brought to the attention of Carbon by Design. Any products which have been installed/used are not subject to return. All returned Items, unless built to print, are subject to a 25% restocking fee. Canadian Customers are responsible for all brokerage fees, any fees not paid by the customer at the time of delivery are subject to further charges. No returns are accepted after 30 days.

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**carbon by design**

10/10/2014

CERTIFICATE OF CONFORMANCE

PO: No.: 25862	DESC: Wiper Deflector	Insp: JR	Packing #: 17302
Customer: Dart Aerospace LTD	Drawing: D4857-P Rev E	Qty: 5	Serials: 17302-1/17302-5

Work Requirements:

Statement of Work:	SOW on file
Internal Process Doc.:	2206-253
Inspection Document:	2206-253
Manufacturing Process:	Pressure Intensifier
Security Requirement:	Confidential

Approved Non-Conformances: NO**Pending:** NO**DISPOSITION:** To Customer, Ship**SHIP METHOD:** FedEx Next DAY**Certification Statement:**

Carbon by Design LP certifies the items listed above conform to all of the applicable work and quality standard required in the purchase order listed above and any additional work requirements referenced.

All in process quality standards have been met according to customer requirements and Carbon by Design internal quality and finish requirements. All materials Certification are available for inspection and will remain on file at Carbon by Design for a period of no less than ten years.

Finished Materials/Process Specifications:

Per Drawing Requirements

Additional Quality Clauses:

Per PO Requirements, 100% Inspection

Active Quality Systems:

ISO9001:2008

Inspector's Name: David Rodriguez**Signature:** David Rodriguez**Title:** QC**Date:** 10/10/14